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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/592,936	09/15/2006	Koji Katano	129370	6051
25944 OLIFF & BERI	7590 12/28/201 RIDGE, PLC	EXAMINER		
P.O. BOX 3208	350	LEE, CYNTHIA K		
ALEXANDRIA, VA 22320-4850			ART UNIT	PAPER NUMBER
			1726	
			NOTIFICATION DATE	DELIVERY MODE
			12/28/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction25944@oliff.com jarmstrong@oliff.com

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Flamework of inempty be available under the providence of 30° CR1 1-1360, in to went, however, may a reply be timely filled. If NO period for reply is appelled above, the maximum statutory period will apply and will express SX (8) MONTH-5 from the maling date of the communication. Failure to reply within its extremed period for reply in appelled above, the maximum statutory period will apply and will express SX (8) MONTH-5 from the maling date of the communication. Period to reply its providence and period will apply and will express SX (8) MONTH-5 from the maling date of the communication. Period of the peri		Application No.	Applicant(s)				
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WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNATION. Eletrations of time may be available under the provision of 30° FR 1138(a). In no event, however, may a nepty be timely liked after SIX (b) (MCNTHS from the mailing date of this communication of 30° FR 1138(a). In no event, however, may a nepty be timely liked after SIX (b) (MCNTHS from the mailing date of this communication after six (b) (MCNTHS from the mailing date of this communication after six (b) (MCNTHS from the mailing date of this communication. Failure to require the mailinearms. See 37 CFR 1.704(b). Status 1) □ Responsive to communication(s) filled on 20 October 2011. 2a) □ This action is FINAL. 2b) □ This action is non-final. 3) □ An election was made by the applicant in response to a restriction requirement set forth during the interview on interest in application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 5) □ Claim(s) 1.24.5.7.9 and 10 is/are pending in the application. 5a) Of the above daim(s) is/are pending in the application. 5b) □ Claim(s) is/are allowed. 7c) □ Claim(s) is/are objected to by the Examiner. 10 □ The specification is objected to by the Examiner. 11 □ The drawing(s) filled on is/are: a) □ accepted or b) □ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.18(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 12 □ The coath or decilization is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 13 □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) □ Copies of the certified copies of the priority documents have been received. 2 □ Certified copies of the priority documents have been received in t	The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence ad	ldress			
1)	 WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any 						
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Response to Amendment

This Office Action is responsive to the amendment filed on 10/20/2011. Claims 1, 2, 4, 5, 7, 9, 10 are pending. Applicant's arguments have been fully considered and are persuasive. However, upon further consideration, the instant claims are rejected under new grounds of rejections. Claims 1, 2, 4, 5, 7, 9, 10 are finally rejected for reasons necessitated by applicant's amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 5, 7, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita (US 5039579) in view of Nau (US 2003/0132315).

Refer to fig. 1. Kinoshita discloses a fuel cell system comprising:

a fuel cell body 1;

a first portion 10 and a second portion 5 which cooperate with each other to jointly form a passage for hydrogen exhausted from the fuel cell body 1.

Regarding claim 4, the second portion is a hydrogen processing unit 5 supplied with heat from inflowing exhaust gas from the fuel cell body 1.

Regarding claim 5, the hydrogen processing unit 5 includes at least one of a dilution unit. Kinoshita's reformer 5 reads on Applicant's dilution unit because the reformer is diluted with water via line 21.

Regarding claim 1, Kinoshita does not disclose a hydrogen exhaust valve disposed in the passage between the first portion and the second portion; and

a spring member interposed between the hydrogen exhaust valve and one of the first portion and the second portion to urge the hydrogen exhaust valve directly against the other one of the first portion and the second portion,

wherein the first portion and the second portion are directly fixed to each other and are both continuously supplied with heat from the fuel cell body following start up of the fuel cell body. Kinoshita teaches a reformer 5 that combines the anode exhaust 10, fuel feed 14, and water 21.

Nau teaches a hydrogen exhaust valve 32 disposed in the passage between a first portion 14 and a second portion 15; and

a spring member 33 interposed between the hydrogen exhaust valve 32 and the first portion 14 to urge the hydrogen exhaust valve 32 directly against the second portion 15,

wherein the first portion 14 and the second portion 15 are directly fixed to each other and are both continuously supplied with heat from the fuel cell body following start up of the fuel cell body.

Nau teaches the reformer nozzle having the advantage that a gas/liquid mixture is generated which is distinguished by a high degree of atomization and thorough

reactant mixing. It also gives the system a good cold start performance and provides adequate response to dynamic load changes [0008].

It would have been obvious to one of ordinary skill of art at the time the invention was made to add the nozzle of Nau to the reformer of Kinoshita for the benefit of thoroughly reacting the feed mixture of Kinoshita's reformer.

It has been interpreted that the common wall 15 of Nau is part of the reformer.

Regarding claim 7, Nau teaches that the first portion 14 includes a cover 14 formed with an internal space that accommodates the hydrogen exhaust valve 32; and the second portion 15 closes the internal space of the cover within which the hydrogen exhaust valve 32 is disposed.

Regarding claim 9, Nau teaches that the hydrogen exhaust valve 32 is fixed to the first portion 14 and the second portion 15.

Allowable Subject Matter

Claims 2, 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The closest prior arts are Kinoshita (US 5039579) in view of Nau (US 2003/0132315).

Regarding claim 2, Kinoshita modified by Nau does not teach wherein the first portion includes at least one of a gas-liquid separation unit and an end plate provided in a stack configured by the fuel cell body. Kinoshita modified by Nau teaches that the first portion is a fuel line.

Regarding claim 10, Kinoshita modified by Nau does not teach wherein seal mechanisms are respectively interposed between the hydrogen exhaust valve and each of the first portion and the second portion.

Response to Arguments

Applicant's arguments filed 10/20/2011 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Lee whose telephone number is 571-272-8699. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Art Unit: 1726

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cynthia Lee/ Primary Examiner, Art Unit 1726